New York and London
May 19, 1998

J.P. Morgan Securities Inc.
Credit Research
Barbara J. Chapman (1-212) 648-2586
chapman_b@jpmorgan.com
Elaine Zaharis (1-212) 648-1118
zaharis_elaine@jpmorgan.com

J.P. Morgan Securities Ltd.
Credit Research
Guillaume Bucaille (44-171) 325-4185
bucaille_guillaume@jpmorgan.com
Matthew James (44-171) 325-5829
james_matthew@jpmorgan.com

JPMorgan

EXHIBIT 2

SALOMON SMITH BARNEY

EQUITY RESEARCH: Telecommunications Services **April 9, 1998**

Jack B. Grubman (212) 816-2877
jack.b.grubman@ssmb.com
Sheri McMahon (212) 816-3193
Christine Gochuico (212) 816-2862
Arzu Cevik (212) 816-6681

Company Report

[redacted]

Growth

WorldCom, Inc.

NASDAQ: WCOM*# **Rating: 1M *(Buy, Medium Risk)***

Combination with MCI Creates the Only Legitimate Telecom Large-Cap Growth Stock

Opinion:

- We are reinitiating coverage of WorldCom following the shareholder vote on the MCI merger with a 1M (**Buy, Medium Risk**) rating, a 12-month price target of $60, and a 24-month price target of $90.
- WorldCom pro forma for MCI represents a large-cap growth stock in the same vein as **Merck, Home Depot, Wal-Mart, Disney, Microsoft**, etc.—an $83+ billion market-cap company with five-year top-line growth of 17% and five-year EPS growth of 32%. We believe WorldCom should trade at a 30x-35x multiple of earnings—similar to these other large-cap growth stocks.
- WorldCom has the most diverse set of strategic assets in the telecom industry and MCI brings WorldCom a base of large customers, a world-class sales force, and systems capabilities to leverage these assets. The result is the only true fully integrated local/long-distance on-net provider of voice, data, and IP on a domestic and global basis.
- WorldCom represents the best combination of growth and value in the global telecommunications industry.

Price 04/07/98	52-Week Range	Earnings per Share 12/97A	Earnings per Share 12/98E	Earnings per Share 12/99E	P/E Ratios 12/98E	P/E Ratios 12/99E	Yield	Est. 5-Yr. EPS Growth
$42.75	$45-$21	$0.40	$0.85	$1.90	50.3x	22.5x	Nil	32%

Market Capitalization: $46 billion ($83 billion pro forma for MCI) **S&P 500:** 1109.55

Table of Contents

Investment Thesis

We reinitiated coverage of WorldCom on March 16, 1998 with a 1M rating and a 12-month price target of $60.

We reinitiated coverage of WorldCom on March 16, 1998 after the completion of the MCI shareholder vote with a Buy rating, a 12-month price target of $60, and a 24-month price target of $90. Salomon Smith Barney is financial advisor to WorldCom on the MCI transaction. Pro forma for MCI, WorldCom represents a large-cap growth stock similar to Merck, Home Depot, Wal-Mart, Disney, Microsoft, etc.—an $83+ billion market-cap company which should post five-year top line growth of 17% and five-year EPS growth of 32%. Thus, we believe WorldCom should be able to sustain a multiple of earnings similar to other large-cap growth stocks which typically trade at over 30x current year earnings.

The business logic of the MCI deal is very compelling.

We believe that WorldCom is one of the two cheapest telecom stocks in the world.

WorldCom has the most diverse set of strategic assets in the telecommunications industry being the only true fully integrated provider of voice, data and Internet protocol (IP) on an on-net facilities basis. The business logic of the MCI transaction was very compelling adding MCI's base of large customers, world class sales force and industry leading systems, software and product set capabilities to WorldCom's diverse set of local, long distance and international assets. WorldCom represents the best combination of growth and value in the global telecommunications industry selling at a firm value to 1999 EBITDA ratio of 8.8 times which is only 42% of its EBITDA growth rate of 20.8% over the next 5 years.

Our investment thesis is predicated on the realization of synergies between WorldCom and MCI.

Our price targets and growth assumptions include synergies from combining WorldCom and MCI for which we provide minute detail in the synergies section of this report to demonstrate the legitimacy of these synergy forecasts. We believe that the synergies and the integration of the companies are much more straightforward than the size of this merger would suggest. The bottom line is that MCI and WorldCom have very complementary customer bases, sales forces, and even network assets (MCI's network has a broader reach in the traditional long-distance sense whereas WorldCom's network assets are much better represented in newly opened markets such as U.S. local and international). Thus, the synergies are primarily driven by simply grooming each other's network assets to optimize one another's traffic flow, as WorldCom takes advantage of MCI's breadth of long-distance facilities to lower its costs while MCI leverages WorldCom's local and international network assets to lower its costs.

We expect premium value for fully integrated companies.

The bottom line is that WorldCom represents the right model for the telecom industry, namely a fully integrated end-to-end network provider with assets in all major telecom geographic locations. We believe those companies which can provide end-to-end connectivity for business customers, especially for fast-growing data and IP services, will be companies which attain and sustain premium valuations.

The Only Legitimate Telecom Large-Cap Growth Stock

Starting in 1999, we see five-year EPS growth of 32% and five-year revenue growth of 17%.

We believe WorldCom represents the only legitimate large cap growth stock in the entire telecommunications universe. Using 1999 as a base since this will be the first full year of MCI being included in WorldCom, we believe WorldCom can grow earnings at a 32% per year clip over the next 5 years with revenue growth running at 17% per year. Specifically, we believe WorldCom's EPS will rise to $2.90 in year 2000 from $1.90 in 1999, to $4.00 in 2001 and to $5.25 in year 2002. At the same time despite capital spending of $7-$8 billion per annum (or $30 billion plus cumulatively over four years), WorldCom's free cash flow per share should rise from slightly less than $1.00 per share in 1999 to $4.20 per share by 2002, which would allow WorldCom to even further deleverage taking its debt-to-total-capital ratio from less than 30% in 1999 to the mid-teens by 2002.

WorldCom is a blue-chip large-cap growth stock which should trade at over a 30x P/E ratio.

Given that WorldCom pro forma for MCI is an $83+ billion market cap company with $38 billion in revenues, its aforementioned growth rates of revenues, earnings, and free cash flow put WorldCom in rarefied company within the S&P. In fact, if one were to find comparables to WorldCom in terms of size and growth the list would be very short and would include the likes of Merck, Home Depot, Wal-Mart, Coke, Microsoft, Gillette and Disney (see Figure 1). These companies on average have $33 billion in revenues, $128 billion of market cap and on average, grow revenues and net income 15%-20% per annum. More importantly, the average P/E ratio on 1998 earnings for this group of companies is 40x, a P/E that this group consistently trades at year in and year out. Thus, we believe that WorldCom, whose relative strategic position within its industry is very strong, who has revenues almost double the aforementioned companies, and who will exhibit growth rates at least as strong as these companies, is the only telecom stock that deserves to be added to the list of blue-chip large cap global growth stocks and hence, we believe we will see WorldCom consistently trading at a 30x-35x P/E year in and year out.

Coca Cola	$195,288	$19 billion	10%	$1.68	17%	47.0
Merck	160,300	$24 billion	18%	4.40	13%	29.7
Gillette	67,830	$10 billion	16%	2.98	17%	40.6
Home Depot	52,806	$24 billion	31%	1.55	30%	44.4
Walmart	114,441	$118 billion	19%	1.77	14%	28.7
Microsoft	232,609	$13 billion	33%	1.65	37%	52.9
Disney	74,326	$23 billion	25%	3.18	19%	33.9
					Avg P/E	**39.6**
		1999 Revenues		**1999 EPS**		**99 P/E**
WorldCom	$83,260	$38 billion	17%	$1.90	32%	22.5

Note: WCOM is stated in 1999 terms since 1999 will be the first full year for the combined WCOM/MCI.
Source: Smith Barney Inc./Salomon Brothers Inc

Our 12-month price target is $60 per share and our 24-month price target is $90 per share.

Based on our earnings forecast, we believe WorldCom should trade at $60 per share over the next 12 months and at $90 per share within the next 24 months. Using a discounted cash flow model on the new WorldCom and very conservatively putting single-digit multiples of EBITDA and mid-teens multiples of earnings on WorldCom's 10 year out numbers, the net present value translates into over $70 per share. Even after a public trading discount, this nets WorldCom a valuation in the $60 range. Suffice it to say, WorldCom is a must own stock, since no company has its diverse set of assets, strategic position, and relative valuation to its growth rate.

WorldCom's Strategic Assets Are Unmatched

WorldCom has the most diverse set of strategic assets in this industry. In fact, one could easily draw a parallel to Microsoft where in the future, somebody will likely write about how the major telecom players in this industry allowed WorldCom to compile the best set of assets, just like people have wondered how IBM could have allowed Microsoft to usurp it in the operating systems world. We believe that there will be two to four global players who are fully integrated facilities-based providers of network services with WorldCom being the only fully integrated communications provider at the current time. We believe the companies that will trade at premium valuations in this industry will be those that can provide end-to-end connectivity especially for business customers that demand data and Internet protocol (IP) services. Basically, if one divides the telecom world into residential versus business on one hand and voice versus data/IP on the other hand, as a carrier you want to be skewed towards serving business customers with non-voice services. This is because selling voice to consumers is increasingly becoming a commodity whereas if a carrier can provide secure, reliable broadband data networks on a global basis, that carrier will command premium pricing (gross margins on data run double those of voice). Moreover, churn in data, especially among enhanced data network offerings, is virtually zero—as opposed to the high churn in voice. Thus, the IRR of a data service's product life is much higher than for voice. In fact, if a carrier has superior data capabilities, it is likely to get a business' voice traffic as well, with that voice traffic likely to be less susceptible to cheap minute promotions from competitors.

If a carrier cannot operate and control network assets in the major business centers around the world, it will not be able to guarantee service reliability and quality nor provision broadband services on a moments notice. Furthermore, the greater the percent of traffic that is carried on-net, the lower the unit cost function since on-net traffic runs at "cost" whereas traffic that is resold, by definition, runs at a multiple of somebody else's cost. In order to be such a carrier, we believe a company needs local network assets in

the top 100-150 MSAs[1] around the world, long-haul fiber networks in North America, Europe and parts of Asia, ownership of undersea fiber cable to "connect the dots" and of course, an IP backbone. Given that 70% of the world's telecom revenues originate out of six countries (U.S., Japan, UK, Germany, France and Italy) with 80% originating out of 20 countries, and that two thirds of the world's country to country calling touch North America and Europe, ownership of network assets in these markets is critical. This is especially true for supporting business customers, since these ratios are even more pronounced for the business market and especially for data/IP applications. Since we continue to believe that there will be a chronic shortage of bandwidth, ownership of end-to-end bandwidth is key to having long-term, profitable growth.

We believe WorldCom has at least a one to two year head start in the provision of integrated facilities-based end-to-end services over other telcos.

WorldCom's asset footprint is unparalleled within the telecom industry. Including MCI, it is the second largest long-distance carrier in the U.S., the largest Internet service provider in the world, the second largest carrier of international voice traffic in the world, the largest CLEC in the U.S., Western Europe, and Japan, and the largest U.S. provider of overseas private line networks. Figures 3 and 4 and Figure 10 (see pp. 28-29 for Figure 10, a map that depicts WorldCom's international assets and a separate map inset that shows WorldCom's Pan-European Ulysses Network) demonstrate WorldCom's depth and breadth of network assets while in Figure 2 we compare WorldCom to other leading telecom companies and it is clear no carrier has WorldCom's diverse set of network assets. WorldCom operates pro forma with MCI a 45,000 mile domestic long-distance fiber network which puts it on par with AT&T in terms of scale and scope and WorldCom has an OC-48/OC-192 backbone. In addition, WorldCom operates in 100 domestic local markets with facilities-based networks where it has fiber into or in front of over 30,000 buildings with this figure rising by 10,000 buildings per year. With UUNET, WorldCom has a ubiquitous IP backbone running at an OC-12 speed (faster than any other IP backbone) with over 1,000 points of presence, 550 of which are outside the U.S.

In addition, internationally, WorldCom is in 27 international financial center markets with either facilities-based local networks or soon to be facilities-based operations in 13 European and Asian countries (including operational networks in Hong Kong and Tokyo where WorldCom received the first facilities based license). These markets include: Amsterdam, Berlin, Brussels, Cologne, Dublin, Dusseldorf, Frankfurt, Geneva, Hamburg, Hanover, London, Milan, Munich, Paris, Stockholm, Stuttgart, Zurich, Hong Kong, Singapore, Tokyo and Sydney. WorldCom is on track to have 35 fully facilities-based operating local networks in major financial centers outside the U.S. by year-end 1998.

[1] MSA = metropolitan serving area.

WorldCom's approach to international markets has been to first build a data node, then expand to a data network and put in a voice switch. As the traffic demands and/or regulatory climates dictates, WorldCom then puts in fiber, and ultimately, full-blown loop networks. This approach ensures that WorldCom efficiently deploys capital while effectively building its presence among business customers in a given market, first with data offerings, then with voice services. Thus, at various stages of development, cities are in various forms but WorldCom never goes into a city with a data node without the intention of having a fully facilities-based operating local networks.

WorldCom has ownership in all the major undersea fiber cables including its own Gemini project with Cable & Wireless across the Atlantic which has 30 gigabits of capacity, is an integrated marine and land-based network, is a full SDH (synchronous digital hierarchy) and WDM (wave division multiplexing) loop architecture (unlike virtually all existing underseas cables, which are linear PDH systems with only 1 gigabit of capacity) and thus, is especially designed for integrated voice, data, and Internet applications. WorldCom has a pan-European fiber network that connects 32 major business centers in Europe and in addition, WorldCom has complete pan-U.K., pan-Germany, pan-Scandinavian, and pan-France networks. Thus, WorldCom covers Europe from Oslo through Madrid while having ubiquitous networks within the major countries where most of the financial centers exist.

This set of strategic assets positions WorldCom to fully leverage the fastest growing and highest margin parts of the telecom industry—serving corporate customers with managed data/IP networks as opposed to selling plain voice services to consumers which day by day becomes increasingly commodity-like. WorldCom has a true international end-to-end fiber infrastructure with the highest capacity, end-to-end network in the world and it is utilizing cross-border licenses and in-country interconnection agreements to take full advantage of these assets so as to provide global connectivity for business users.

The one asset WorldCom does not own is wireless and we doubt that WorldCom will buy wireless assets anytime in the foreseeable future. Simply speaking, cellular/PCS is not strategic for business customers since one cannot guarantee the integrity of a wireless network in the way that one can for voice or data. Furthermore, most corporate CIOs would rather reimburse employee cellular calls on an individual basis than give a carte-blanche cellular usage plan (especially since individual employees can get great deals themselves on the retail level). Frankly speaking, cellular remains largely a local exchange service and not one that is a critical part of the suite of voice, data, and IP network services that large business customers demand. Hence, we view WorldCom's and MCI's decisions not to pursue wireless assets as being beneficial for shareholder value without impacting an iota the ability to provide global end-to-end connectivity.

The fact that WorldCom has these assets in place today (versus other carriers who will attempt to combine in order to achieve this footprint) gives WorldCom we believe at least a one to two year head start in the provision of integrated facilities-based end-to-end services. A head start that should bode well for shareholder value creation.

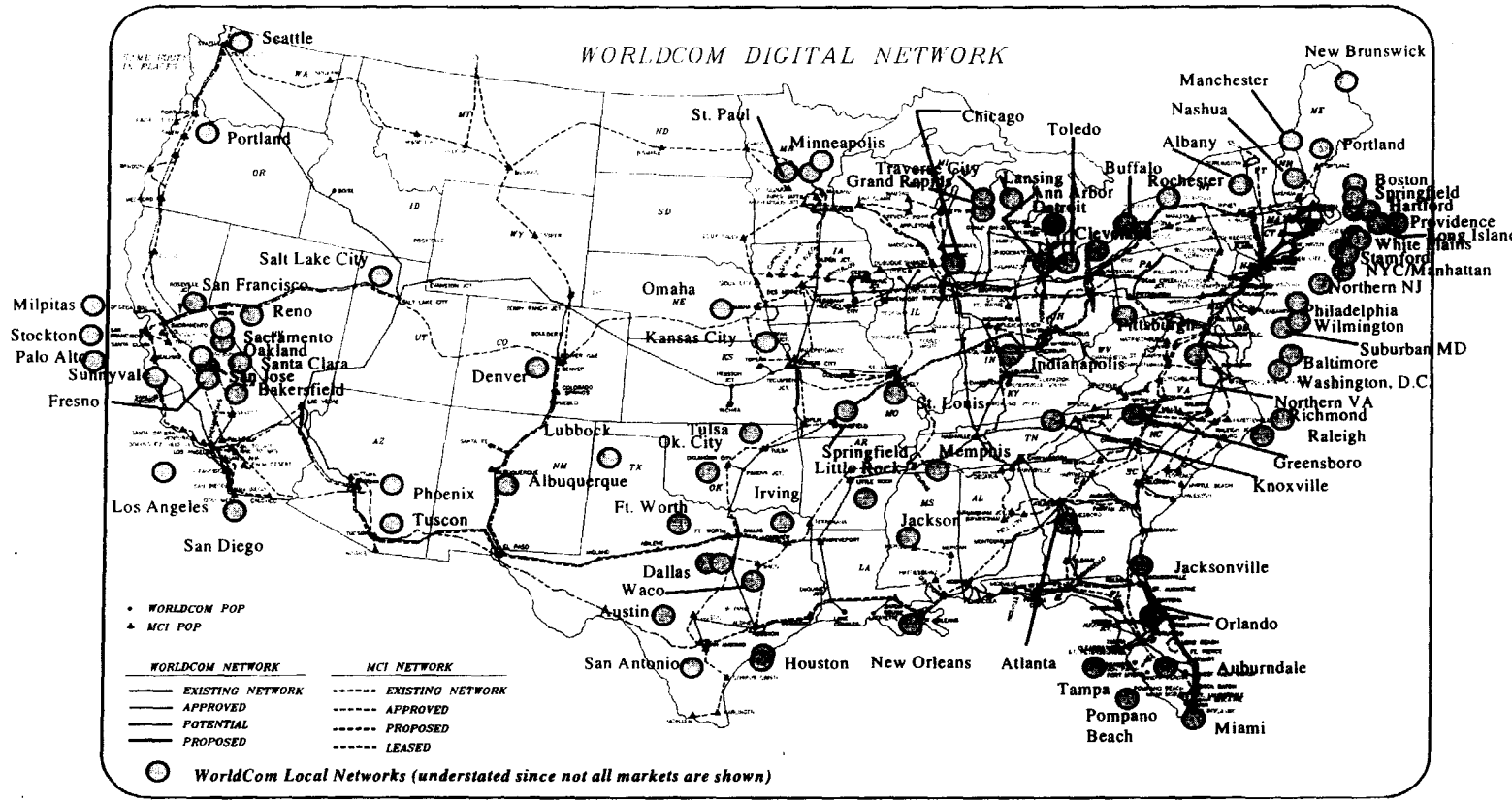
	Network	Local Markets	Backbone	System	In Major Markets
	Yes	Yes	Yes	Yes	Yes
	Yes	Partial	No	Yes	No
	Yes	No	Yes	Yes	No
	No	100% in-region 0% out-of-region	No	No	No
	Partial	Scattered, smaller markets	Yes (BBN)	No	No
	Yes	No	No	Partial through swaps	No
	Partial	No	No	No	No
	No	Regional clusters or scattered properties	Only ICGX and ICIX	No	No
	No	No	No	Yes	100% in-country 0% out-of-coutnry

Source: Smith Barney Inc./Salomon Brothers Inc

Total Route Miles	TOTAL
Domestic local	9,683
Domestic long distance [a]	44,619
International local/long distance [b]	1,594
Submarine (underseas)	4,046
Voice Switches	
Domestic local	88
International local	20
Domestic long distance	129
Gateway	12
Equipped Switch Ports	
Domestic local	3,313,232
Domestic long distance	7,685,400
International local/long distance	382,510
Data Switches (Frame, ATM)	
Domestic	864
International	96
Internet Presence	
Points of Presence	1,000+
Modems in Service	600,000
Network Backbone Speed	OC12
Satellite Earth Stations (Dedicated)	45
Satellite Earth Stations (Gateway)	20
Facilities-Based Local Markets (Fiber Networks)	
Domestic (Net of overlapping markets)	100
International [c]	35
Telco Collocation (#LSOs)	345
Active Buildings	
Direct (fiber into)	6,008
Indirect (fiber in front of with dedicated DS3 connection)	24,142
Total	30,150

[a] MCI domestic long distance route miles are on their fiber network only and does not include 15,000 digital microwave route miles.
[b] These are route miles wholly contained in countries or between countries outside the U.S.
[c] Fully built-out by year-end 1998, of which 40% are currently complete.
Source: Smith Barney Inc./Salomon Brothers Inc

Figure 4: WorldCom U.S. Local and Long Distance Fiber Networks



Source: WorldCom

Logic of the MCI Deal Very Compelling

WorldCom's President and CEO, Bernie Ebbers, is a true visionary. Of course, once he reads this he is likely to hit us upside the head for calling him a visionary, precisely the type of label he disdains. Having known Mr. Ebbers for over a decade, it is evident that he has typically done the transforming deals in this industry well in advance of his vision becoming consensus opinion. It is also important to note that Mr. Ebbers has always done transforming deals when his stock has been at all time highs and when visibility of continuation of strong growth was high and thus, Mr. Ebbers was under no particular pressure to do something. To put things in perspective, in 1994 when LDDS at the time was the largest long-distance reseller in the United States and therefore was the largest user of minutes and consequently got low rates, LDDS bought WilTel because Mr. Ebbers felt then that ownership of network assets was important—something the rest of the world didn't seem to figure out for a few years (in 1994, one could not find a network engineer on the planet who thought there would ever need to be one more strand of fiber laid—they were wrong, of course). In the summer of 1996, again WorldCom was rolling along hitting new highs and yet Mr. Ebbers decided that a standalone long-distance company could not make it in the post-Telecom Act of 1996 world and thus, acquired MFS/UUNET to become a fully integrated provider of local, long distance and Internet services, an action the rest of the industry is now scrambling to replicate.

The MCI merger, which brings MCI's salesforce, customer base, and information technology (IT) systems will allow WorldCom to fully leverage its asset base.

This brings us to the decision-making that led to the MCI transaction. One could have made the following statement about WorldCom in the summer of 1997: WorldCom through its MFS and UUNET facilities was the only telecom carrier able to provide end-to-end, building-to-building connectivity on-net from major cities in North America to major cities in Europe and the Pacific Rim for any type of service from voice through data through IP (MCI's assets don't really add to this capability, since MCI's asset contribution is essentially their U.S. LD network). However, there was one minor problem, that being WorldCom's customer base didn't care about end-to-end connectivity. The WilTel and MFS acquisitions were asset acquisitions. The bulk of WorldCom's customers remained the old LDDS base, which typically use less than $1,500 per month of long-distance calls and typically are voice-oriented and care more about calling state to state than country to country seamlessly on a data network.

Therefore, for WorldCom to fully leverage the asset base it had put together, WorldCom needed large customers who cared about such connectivity. In order to get those large customers, WorldCom needed a national account sales force and in order to empower such a sales force, it needed systems and IT capabilities as well as a full and rich product set. If WorldCom had to develop these systems and product capabilities on its own, not to mention hire a high end sales force from scratch and then acquire large customers in

the marketplace, it would have taken several years and cost a lot of EBITDA dollars to do so. Luckily, the MCI situation with BT led itself to WorldCom being able to come in and make a better offer and thus, avoid the lengthy and costly process of attempting to replicate what MCI had on its own.

MCI brings the right kind of large business customers to match WorldCom's assets.

MCI represented a perfect business fit for WorldCom by bringing it the right customers, sales force and systems capability to leverage WorldCom's network assets. MCI is very skewed toward larger customers. Of MCI's $11 billion in business long-distance revenues, $8 billion come from either key accounts of $5,000 or more per month which are multi-location accounts, national accounts, which are U.S.-based but have national networks and are heavy data users; or global accounts such as Microsoft, Chrysler, Citicorp and American Express (see Figure 5). In addition, another $1 billion is derived from U.S. government agencies. This base of customers are precisely the type of customers who require, if not demand, the type of end-to-end connectivity that WorldCom and MFS' networks can provide.

Global Accounts	**$2.4**	Top 300 corporations-global, data and voice requirements. Names such as Microsoft, American Express, Citicorp, Chrysler, etc.
National Accounts	**$3.4**	7,500 accounts, U.S. based but very sophisticated national network needs. Names range from Barnes and Noble to The Weather Channel.
Key Accounts	**$2.0**	40,000-45,000 accounts-multi-location, multi-regional in nature with both voice and data requirements. Typically bill $5,000-$10,000 per month and above.
Government	**$1.0**	Projects such as FAA network, which are very data-intensive.
Wholesale	**$2.5**	Declining revenues as MCI de-emphasizes.
Mass Market Business	**$0.7**	Small business customers, typically WCOM's strong suit.
Residential	**$5.7**	15 million accounts, 30%+ of revenues from transactional services (i.e., call by call such as 1-800-Collect, 10-321, etc.) Of $4 billion of dial-1, 90% of customers on one or more different plans. MCI has 96% of airline miles connected to long-distance calling plans.
Total LD Revenues	**$17.7 Billion**	Bulk of revenues driven by commercial/government users who will take advantage of WCOM's local and international network assets.

Source: Smith Barney Inc./Salomon Brothers Inc. and MCI.

MCI's salesforce is generally regarded as the best in the industry and its systems capabilities are unmatched.

In addition to a blue-chip customer base, MCI has 6,500 sales people in 250 branches who are generally regarded as world class by those within the industry. In fact, they are a sales force from where most of the other industry players usually attempt to steal salespeople. In addition to the right customers and right salespeople, MCI is also the leading systems and software developer in the telecom industry. In fact, MCI's heritage, even when the company had a balance sheet that was leveraged to the point of being a step

away from vanishing, has always been to develop its own product sets and software capabilities. MCI always had 3,000 to 5,000 dedicated software developers who produced very feature rich product sets. The fact is back in the mid-1980s, unlike other long-distance carriers who took fully configured switches from a switch manufacturer, MCI would only take the shell of, for example, a Northern Telecom DMS-250 switch with only the switching module intact and MCI would write applications modules that enabled it to develop the software and product sets themselves. Over the last four years alone, MCI has spent $6 billion on software network intelligence, a figure that far surpasses any other carrier in this industry. The result of this is that MCI has the richest global, national and international product set for both residential and business customers and in fact, MCI's network intelligence platform is run all or part in about 40 countries around the world including Canada.

WorldCom and MCI is a perfect marriage.

Thus, the combination with MCI is a perfect marriage—marrying MCI's blue-chip customer base, world renowned sales force and industry leading systems, software and product capabilities with WorldCom's most diverse set of telecom assets. In addition, WorldCom will be able to impose its industry-leading operating practices, in terms of running a flat organization and lean cost structure onto MCI's vast revenue base and cost structure, meaning MCI's stand alone business will see efficiencies before any synergies are ever realized. The result is that this new company can continue to build products to put on end-to-end facilities, which will generate an even stronger foothold among the business customer base who will want global connectivity on a seamless facilities platform. The result of which will be more revenues completely on-net, end-to-end which of course drives margins and capital efficiencies.

The logic from a shareholders perspective is equally compelling to the business logic.

On top of the business logic, which made tremendous sense, the stock logic for doing the MCI transaction was equally compelling. In essence, WorldCom traded growth for scale and in doing so, we believe, opened up WorldCom to be considered by a wider array of equity assets under management than was the case before where WorldCom tended to be narrowly but deeply held. In fact, if one attempts to figure out under which scenario WorldCom is more likely to hit $100 per share over the next 24-30 months, it is clearly with MCI as opposed to without MCI. For WorldCom to hit $100 a share over a 30 month period, this would suggest that on the new company financials, one would only be paying 2x-3x forward revenues, 5x-6x forward EBITDA and 20x-25x forward earnings—multiples that are all quite reasonable. For the old WorldCom to get to $100 in 30 months it would have to continue to fetch forward multiples closer to 5x revenues, 15x EBITDA, and 40x earnings—multiples that are harder to sustain as a company's market cap grows.

Synergies and Integration Straightforward

MCI and WorldCom have very complementary customer bases, sales forces and even network assets.

While we do not want to minimize the task ahead for WorldCom and MCI, nonetheless we believe that the synergies that will be realized and the integration of the companies are much more straightforward than the size of this merger would suggest. In the following section, we discuss in detail the sources of synergies which should clearly demonstrate the realness of the synergy outlook. For purposes of this discussion we broke synergies into overall SG&A (local and long distance), domestic network savings (i.e., fixed and variable long-haul savings as well as access savings and MCI local savings by virtue of using WorldCom facilities), and international network savings mostly due to termination benefits. The bottom line is that MCI and WorldCom have very complementary customer bases, sales forces and even network assets (MCI's network has a broader reach in the traditional long-distance sense in that it connects deeper into Bell networks, has more points of presence in all LATAs and has operating agreements to—but not facilities in—more countries whereas WorldCom's network assets are much better represented in newly opened markets such as U.S. local and international, where WorldCom has a much more facilities-based presence in country than does MCI).

In other words, there is very little guesswork associated with the vast majority of synergies here. It is simply regrooming one another's network to optimally carry the combined traffic loads of the two companies. In some cases, WorldCom saves more (e.g., off-net long haul or direct end office termination, where WorldCom takes advantage of MCI's greater breadth of long-haul facilities) while in other cases MCI realizes the bulk of the savings (e.g., local Bell entrance facility costs, dedicated access/local loop expense or international interconnection costs, where MCI can leverage WorldCom's local and international network assets).

Of the $2.5 billion in likely synergies in 1999 going up to $5.6 billion in the year 2002 (see Figure 6), 60% of the 1999 synergies and 80% of the 2002 synergies are in network expense and SG&A areas that we would describe as optimizing each other's networks to take advantage of each other's known and existing traffic flows and anticipated growth of specific services. Furthermore, since the deal should close by the end of July, there will be four months of synergies in 1998 which means that even if the "slope" of cost synergies remains as we forecast, the "intercept" entering 1999 should be higher than we think given the running start in the last four months of 1998. We would point out that WorldCom exceeded its synergy targets on MFS by 40% in the first year as a merged company.

Of course, nowhere in our numbers are revenue synergies that will likely be huge, since we estimate that MCI's business customers alone generate $5-$10 billion in local service revenues and 90% of MCI's key, national, and global

accounts are in buildings where WorldCom has fiber into or in front of and these customers collectively account for 80% or more of these local revenues. If one assumes that WorldCom could over time capture one-third of these revenues with an incremental margin of 30% (which is conservative), it would represent an additional $2.5 billion in annual pre-tax synergies.

$ in billions

	1999	2000	2001	2002
SG&A Savings	$1.3	$1.4	$1.5	$1.7
Domestic Network Savings	$0.8	$1.4	$2.1	$2.6
International Network Savings	$0.4	$0.7	1.0	$1.3
Total	$2.5	$3.5	$3.6	$5.6

Source: Smith Barney Inc./Salomon Brothers Inc and WorldCom Inc.

SG&A Savings

The SG&A savings we are estimating only account for about 10% of total SG&A expense.

We estimate overall SG&A savings of $1.3 billion in 1999 growing to $1.7 billion by 2002, of which there is $1 billion of core long-distance SG&A savings in 1999 growing to $1.3 billion in 2002, with the remainder coming from local savings. Of core SG&A savings, roughly one-third comes from corporate overhead, one-third comes from network operations—since there are systems that could be married together—and one-third comes from IS and IT savings. These savings are mostly on the WorldCom side, since WorldCom will not have to develop many of the software systems that MCI already has. Given that the SG&A savings in total only account for about 9%-10% of total SG&A expense over the 1999-2002 time period, we believe that this is a figure that will likely be surpassed especially when one considers WorldCom's track record where in past mergers WorldCom realized closer to 13%-14% savings of total SG&A. It should be noted that no layoffs are included in the SG&A synergies since as a growth company, WorldCom consistently adds to its work force. In fact, in 1997 WorldCom realized synergies on MFS of $357 million, $100 million more than they signaled to the Street a year ago—despite adding a net 3,000 employees. In addition to core SG&A savings, we believe WorldCom will realize an additional $300 to $400 million per year in MCI local SG&A savings as WorldCom can eliminate duplicate city managers, staff requirements, and systems work geared towards Bell interconnection and building entrance facilities.

Domestic Network Savings

Domestic network savings are projected to total $800 million in 1999 and grow to $2.6 billion by 2002 and can be categorized by fixed costs (monthly fees to access other carrier networks) and variable costs (metered, per-minute or per-call fees) which we describe in rigorous detail in the following pages. Of the domestic network savings, $100 million in 1999 and $800 million in 2002 are derived from network savings for MCI local driven by differences in

WorldCom versus MCI local footprints and the resultant lower reliance on resale/unbundled network elements from the Bells. The remainder of the domestic network discussion will concentrate on long-distance network synergies where the bulk of the savings are derived (long-distance network synergies are $700 million in 1999 going to $1.8 billion in 2002). Domestic network synergies from the combination of WorldCom and MCI fall into fixed line charges of which there are four categories (off-net costs, entrance facilities costs, dedicated access/local loop charges, and direct end office trunking (DEOT) costs) and savings associated with variable costs such as switched access costs, in-WATS (or "wide area telecom service") costs, domestic WATS costs, non-contiguous WATS costs, directory assistance costs, and debit card costs. In 1999 the fixed and variable components of domestic network savings are roughly equal but by 2002 variable cost savings will represent about two-thirds of domestic network savings.

Fixed Domestic Line Costs

We believe the reduction in off-net costs accounts for roughly 10% of domestic line synergies.

OFF-NET COSTS. Off-net costs are monthly fees incurred by WorldCom or MCI when leasing a line from another long-distance company to provide service on specific corridors where WorldCom or MCI has customers but not enough room on its own network to handle all the traffic. This is a frequent occurrence among all long-distance carriers (none of whom carry 100% of their traffic on-net) where they will lease a dedicated circuit between city pairs, where their particular network does not have enough circuits but a given carrier does not want to do new construction on a particular route. WorldCom is expecting to reduce its projected off-net costs after the MCI merger by moving its off-net capacity that is on the long-distance networks of other long-distance carriers to MCI's long-distance network. Currently, approximately 20% of WorldCom's off-net capacity is on MCI's network and we believe that WorldCom could move up to 70% of its off-net capacity not already on MCI's facilities gradually onto MCI's facilities. In addition, MCI will be able to save costs by moving more of its off-net capacity onto WorldCom's long-distance network, which becomes particularly compelling as WorldCom completes its planned network build. MCI currently has 15% of its off-net capacity on WorldCom and we estimate that 35%-50% of MCI's off-net capacity will ultimately be on WorldCom's network. The total impact to the synergy line from reduced off-net costs (both on the WorldCom and MCI side) probably equates to about 10% of the projected total domestic long-distance network savings for 1999 (dropping to 8% by 2002) or about 20% of the fixed line cost savings.

We believe the reduction in entrance facilities costs accounts for roughly 20% of domestic line synergies.

ENTRANCE FACILITIES COSTS. Entrance facilities costs are the monthly fees paid by long-distance companies when they lease a line from an RBOC[2] or a LEC[3] that connects the LEC's serving wire center (location on a LEC network where an IXC's traffic enters or exits the LEC network; see Figure 7) with the long-distance company's POP[4]. MCI will be able to reduce its projected entrance facilities costs after the proposed merger by moving its entrance facilities capacity that is on the local networks of other carriers to WorldCom's and Brooks Fiber's local networks. After the merger is completed, we estimate that WorldCom's local network (i.e., MFS) could provide 65% of MCI's entrance facility capacity with Brooks Fiber's local networks providing an additional 5% for MCI. Thus, as of today WorldCom can provide 70% of MCI's local entrance facility capacity and given the current expansion plans of MFS and Brooks, by 2002, 90% of MCI's entrance facility capacity will be provided for by WorldCom's local network assets. We assume WorldCom's local networks do not currently provide any of MCI's entrance facility capacity (nor does MCI do it themselves) but by the end of 1999 50% of MCI's entrance facility capacity should be on WorldCom local networks with 100% by 2001. Therefore, the savings are quite significant and probably are responsible for slightly over 20% of the projected total domestic long-distance line cost synergies from the merger.

DEDICATED ACCESS/LOCAL LOOP CHARGES. When long-distance companies provide a customer with a private line between different cities, they lease a dedicated access line (DAL) or local loop (LL) from a LEC. A DAL typically connects an end user to a long-distance switch and these dedicated lines bypass the LEC's local switched network. DALs are essentially dedicated originating access that cost less than switched access if volumes are sufficiently large. Similarly, a local loop provides non-switch connection between an IXC and an end user. When a long-distance carrier provides a customer private line service between cities, that long-distance carrier typically leases a local loop at either end of the private line to complete the non-switched connection for the end-user.

[2] RBOC = Regional Bell Operating Company (Ameritech, Bell Atlantic, BellSouth, SBC Communications, and U.S. WEST).

[3] LEC = Local Exchange Company (the largest in the U.S. are the RBOCs and GTE).

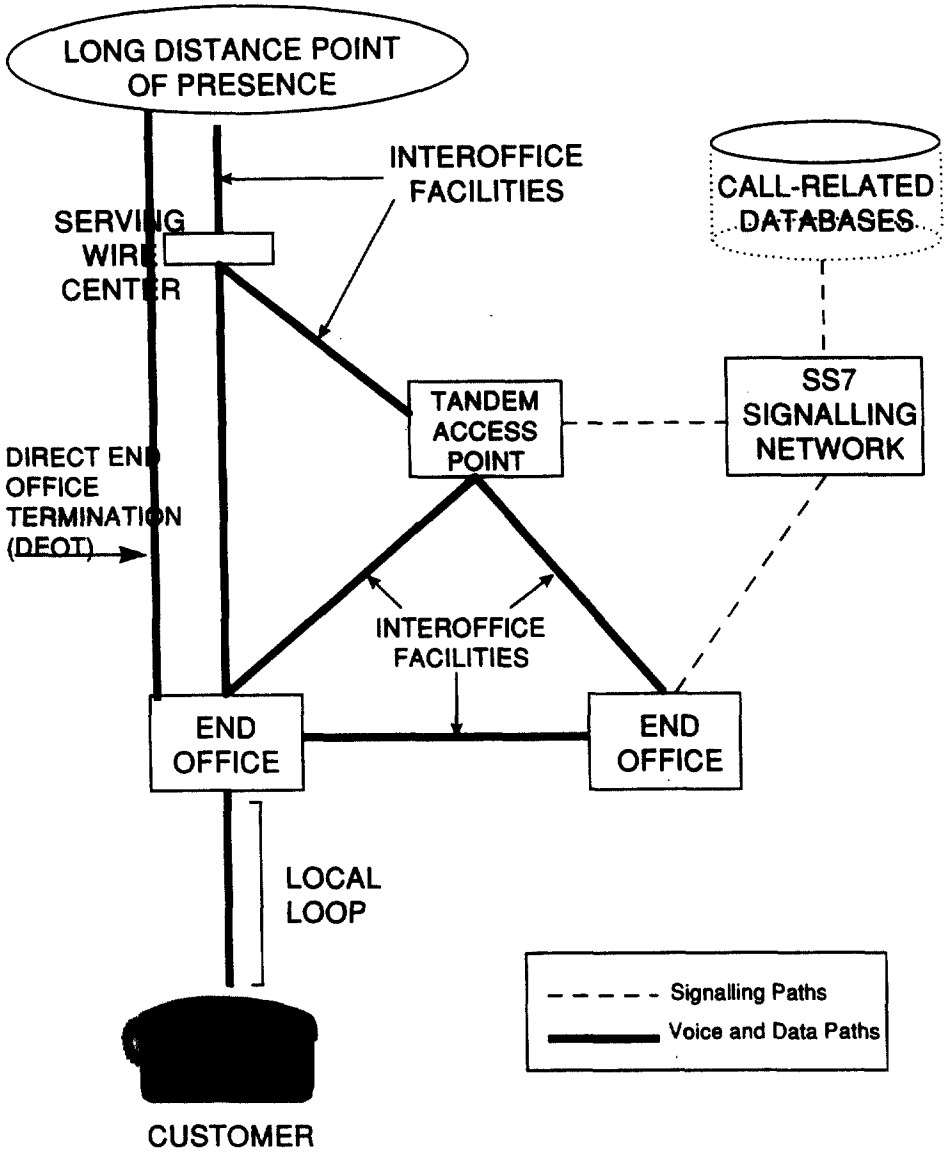
[4] POP = point of presence. The long distance company's office within a particular LATA (local access and transport area) where traffic on the company's network is routed to and from a LEC's local network.

Synergies appear as MCI moves its DAL and LL capacity onto WorldCom's MFS and Brooks Fiber local assets and furthermore as WorldCom's CLEC[5] operations expand, the savings continue to increase. This synergy item is a direct function of WorldCom's building entrances. Today WorldCom has fiber into and up the risers in over 6,000 buildings with this figure increasing by 3,000 per year. WorldCom has fiber in front of 24,000 buildings where it has a T-1 or DS-3 connection or where it will spur off the fiber directly with the number of these buildings increasing 7,000 per year. Currently, WorldCom provides MCI about 2% of MCI's DAL and LL capacity but over time, virtually all of MCI's DAL and LL capacity should go to WorldCom local networks since 90% or more of MCI's business users who use dedicated local facilities are in WorldCom direct or indirect buildings.

DIRECT END OFFICE TRUNKING COSTS. On the domestic network side in the long-distance area, long-distance companies enter Bell networks through a wire center and can terminate into Bell facilities at one of two places—either an access tandem point where most of the second-and third-tier carriers terminate or into what is known as direct end office termination or DEOT, where AT&T and MCI and to a large degree Sprint tend to terminate (see Figure 7). Termination via access tandems routes a call from a wire center through the tandem to one of several end offices connected to a tandem and ultimately to an end user. This route is billed on a per-minute basis and is a subpart of switched access costs.

In contrast, the DEOT route, as seen in Figure 7, goes directly from an IXC POP to a LEC end office and this part of access is a fixed monthly fee and is a subpart of dedicated access. If one terminates on a DEOT basis versus on an access tandem basis, one is terminating deeper into a Bell network and hence saves a portion of switched access costs (if we wanted to be picky we could have put DEOT in variable cost savings). MCI has direct end office termination about 80% of the time (similar to AT&T), whereas WorldCom has over 50% of its termination at the access tandem point. Hence, as WorldCom takes its traffic to MCI's DEOT termination points there are savings to be realized. We would expect 75% of WorldCom's traffic can go on MCI DEOT routes.

[5] CLEC = competitive local exchange company (WorldCom's CLEC operations include MFS and Brooks Fiber, MCI's CLEC operation is MCImetro, publicly traded CLECs include ICG Communications, Intermedia Communications, NEXTLINK, McLeod Inc., MetroNet, Teligent, RCN, WinStar, etc.)



Source: Smith Barney Inc./Salomon Brothers Inc

Variable Domestic Line Costs

The largest portion of domestic line cost savings comes from MCI putting originating and terminating access onto WorldCom's facilities.

SWITCHED ACCESS COSTS. Switched access is obviously the single largest expenditure of a long-distance carrier and hence, the source of the greatest synergy potential. WorldCom has operating networks between Brooks Fiber and MFS in over 100 markets and more importantly, has fiber into 5,400 buildings (versus MCI's 600), up the risers and all, with fiber in front of another 22,000 buildings with direct connectivity into those buildings (as opposed to MCI's 1,700). WorldCom is adding 8,000 to 10,000 buildings a year to this count. Furthermore, WorldCom with MCI will have 88 local switches, 3.3 million domestic local switch ports, and is already co-located into almost 350 Bell end offices, with local switched ports and co-locates more than doubling each year. We estimate that 90%+ of MCI's major,

national, and global accounts reside in buildings where WorldCom has fiber into or in front of and that a good chunk of MCI's mass market business customers can be reached via unbundled loops off of WorldCom's co-locates with Bell end offices.

The potential to put MCI originating and terminating switched access[6] onto WorldCom's facilities as time goes on not to mention all new customers from the get-go being carried on WorldCom's local facilities probably equates to close to 40% of the total projected domestic long-distance line cost synergies in 1999 growing to almost 70% of the 2002 projected domestic long-distance line cost synergies. This is because MCI should go from having essentially no switched access on WorldCom local facilities to having close to 40% of its switched access on WorldCom local facilities by 2002, which nets huge savings. This of course does not even include revenue synergies by putting MCI's customer base onto WorldCom for local service, something that is not in our numbers but clearly is an upside to our earnings forecast.

DOMESTIC WATS COSTS. Long-distance companies incur domestic WATS costs (sometimes called out WATS or overflow WATS) when they pay another IXC to terminate a domestic call. This stems from having overflow traffic on routes where a particular IXC has not leased a dedicated "off-net" circuit. After the merger, WorldCom and MCI will be able to reduce their projected domestic WATS costs by optimizing their WATS rates with other long-distance carriers—probably to the tune of a 5% rate reduction.

IN-WATS[7] COSTS. Long-distance companies incur In-WATS costs when calls originate on another IXC's network and are delivered to its own network. For example, if a customer places an "800" call in Alaska to a WorldCom customer, WorldCom pays a per-minute or per-call fee to the IXC in Alaska to deliver the "800" call to WorldCom's network. Savings are generated since MCI currently enjoys better In-WATS rates than WorldCom because of its higher In-WATS traffic volume and thus, WorldCom can optimize its current In-WATS rate schedule. In addition, MCI has facilities and/or agreements with other carriers in more geographic regions than WorldCom, hence at the margin there will be fewer "In-WATS" charges, since traffic will originate more on "owned" facilities. Also, the combined company could achieve additional savings by taking advantage of its greater purchasing power, resulting in a 10% reduction in WorldCom In-WATS rates and a 5% decrease for MCI.

[6] Switched access costs are the charges long distance companies incur when they use the local switched network of a LEC to originate or terminate a long distance call.

[7] WATS = wide area telecommunications service.

NON-CONTIGUOUS WATS COSTS. Long-distance companies incur non-contiguous WATS costs when they pay another IXC to terminate a call outside of the continental U.S. but within Alaska, Canada, Hawaii, Puerto Rico or the Virgin Islands. Similar to In-WATS savings, the combined company has greater purchasing power and WorldCom can take advantage of MCI's facilities and/or relationships with other carriers. All in, the combined company can see a 5%-10% reduction in these rates. The combination of domestic WATS, In-WATS, and non-contiguous WATS amounts to savings of only about $30-$40 million per year but, represent the type of long-haul savings this combination can achieve by leveraging one another's network reach and existing carrier relationships.

DIRECTORY ASSISTANCE COSTS. Long-distance companies pay directory assistance costs to LECs for providing directory assistance services to their respective long-distance customers. For example, if a New Jersey WorldCom customer calls directory assistance in Washington D.C. by dialing "1-202-555-1212", WorldCom pays a LEC in Washington D.C. a per-call fee for providing the service. Again, the synergies in this category arise from the combined company having greater purchasing power.

DEBIT CARD COSTS. WorldCom currently pays a third-party vendor a per-minute or per-call fee to process calls made on its debit cards. After the merger, WorldCom will be able to use MCI debit card platform, resulting in savings of roughly 5% of total domestic long-distance synergies.

International Line Cost Synergies

International savings are created as MCI terminates on WorldCom's facilities in Europe and as WorldCom puts international traffic onto MCI's operating agreements throughout the world.

On the international side there are similar very hard and identifiable synergies, which are projected to be $400 million in 1999 growing to $1.3 billion in 2002. The synergies are divided between lower MCI costs from terminating on WorldCom's non-U.S. facilities and lower WorldCom costs via MCI direct agreement routes. In 1999, about 47% of the savings will be derived from lower MCI costs, which by the year 2002, will account for 60% of the total international synergies, as MCI's international traffic grows and as WorldCom builds out more international networks in Europe and Asia. MCI probably generates 30%+ of its entire international traffic to Europe where, in virtually all cases, WorldCom has switches, facilities and interconnection agreements with all the major European countries where MCI terminates traffic.

When a carrier terminates traffic into a foreign country, typically a U.S. carrier is paying a significant rate per minute to terminate, even net of return traffic. As Figure 8 illustrates, the normal way a U.S. carrier carries traffic to another country is to connect into a PTT switch, pay a settlement rate and then pay a domestic transport rate. Since the U.S. generates more outgoing calls than incoming calls (an 8 billion minute deficit), and has a lower settlement rate, the U.S. in total has a $5 billion international deficit in voice traffic.